

A. Cover Sheet (Attach to front of proposal.)

1. Specify: ☐ agricultural project or ☐ individual application or
☒ urban project ☒ joint application
2. Proposal title—concise but descriptive: Santa Barbara County
Distribution and Installation Program for the Weather TRAK ET Controller
3. Principal applicant—organization or affiliation: Santa Barbara County Water Agency
4. Contact—name, title: Rory Lang, Water Resources Program Specialist
5. Mailing address: 123 East Anapamu Street, Santa Barbara, CA 93101
6. Telephone: (805) 568-3545
7. Fax: (805) 568-3434
8. E-mail: rlang@co.santa-barbara.ca.us
9. Funds requested—dollar amount: \$ \$205,975.00
10. Applicant cost share funds pledged—dollar amount: \$ \$145,350.40
11. Duration—(month/year to month/year): June 2001 to June 2004
12. State Assembly and Senate districts and Congressional district(s) where the project is to be conducted:
State Assembly Districts 33 and 35; Senate District 18; and
Congressional District 22
13. Location and geographic boundaries of the project: Santa Barbara County in the
service areas of the Santa Barbara County Water Agency, the City
of Santa Barbara, the Goleta Water District, the City of Santa Maria,
Vandenberg Village CSD, and the City of Lompoc.
14. Name and signature of official representing applicant. By signing below, the applicant declares the following:
— the truthfulness of all representations in the proposal;
— the individual signing the form is authorized to submit the application on behalf of the applicant;
— the applicant will comply with contract terms and conditions identified in Section 11 of this PSP.

Rob Almy, Water Agency Manager

(printed name of applicant)


(signature of applicant)

02/12/01
(date)

The Santa Barbara County ET Controller Distribution and Installation Program

B. Scope of Work

1. Abstract

Water use efficiency in the residential landscape is an important component of achieving overall water demand reductions. To increase residential landscape water efficiency, the Santa Barbara County Water Agency, the City of Santa Barbara, and the Goleta Water District have jointly developed a Distribution and Installation Program for the *Weather TRAK* ET Controller. The *Weather TRAK* ET Controller technology provides efficient, long-term irrigation scheduling by automatically creating a weekly irrigation schedule based on evapotranspiration (ET) data from local CIMIS stations.

In Santa Barbara County (County), it is estimated that water for landscaping equals 59% of total residential water use (estimate based on the AWWARF *Residential End Uses of Water*). The water savings projections developed in an Irvine, California study of 40 homes with ET Controllers demonstrated that these devices will decrease residential landscape water use by 25%. The climate, residential landscaping plant palette, and landscape maintenance practices in Irvine, California are similar to Santa Barbara County. Therefore, this study's savings results can be applied to Santa Barbara County and indicate a potential for significant water savings with ET Controllers in Santa Barbara County. The service areas of the partner purveyors are ideally suited for the use of ET Controllers because of the heavily landscaped residential lots averaging two acres in size. Almost all of these properties are maintained by landscape contractors and have irrigation controllers. The ET Controller Distribution and Installation Program (ET Controller Program) will assist in achieving the water conservation goals of the partner purveyors.

The ET Controller Program will involve distribution and installation of 625 ET Controllers over three years. Each purveyor will target their residential customers with the largest landscapes and the highest irrigation water demand. The program will include marketing ET controllers to targeted residential customers, installing ET Controllers at demonstration sites, training local landscape contractors to install the controllers, and providing participating customers with ET Controllers installed with rain sensors.

2. Statement of Critical Issues

There are several critical issues that demonstrate the importance of the ET Controller Program for Santa Barbara County, including periodic droughts and limited local water supplies, a large number of residential irrigation controllers, and many improperly managed residential landscapes.

Santa Barbara County has a Mediterranean climate with several microclimates. Summers are warm and dry and winters are cool and often wet. Annual precipitation in the proposed project area varies from 12" in Lompoc to a maximum of about 18" on the South Coast. The region experiences periodic droughts, which have an average duration of five years and a maximum of nine years.

Local water supplies include the Santa Ynez River watershed, with Lake Cachuma a USBR facility, providing the majority of the local surface supply. Participating purveyors are also State Water contractors. The semi-arid climate, periodic droughts and high cost of water locally, make efficient use of the limited water supplies essential.

Because Santa Barbara County has a dry climate, most homes built since the early 1980s have irrigation controllers. Landscaped areas of residential lots range from 2,000 square feet to three acres. It is estimated that over 50% of these landscaped residential lots have irrigation controllers. Residential properties, in particular in Santa Barbara and Goleta, have large residential landscaped areas that average .5 acres and use 50 to 300 hcf per month in the summer.

Many residential water customers in Santa Barbara County have landscape contractors maintaining their landscapes. It has been found that many landscape contractors and homeowners are lacking knowledge and or time to properly manage landscape irrigation schedules. According to Network Services, a person would have to modify the irrigation schedule of their irrigation controller up to 70 times a year to provide the correct amount of water according to ET data. From the experience of the partner purveyors' staff, system adjustments do not occur at even a third of this frequency. The ET Controller Program will allow customers to effectively water their landscape without additional time or a change in behavior, both of which have been found as to be deterrents to long-term water conservation.

Since 59% of water use in the County is used for residential landscape irrigation, the ET Controller Program has a significant potential for water savings. It is estimated that at the completion of this three-year program, the water savings achieved will be 291 acre-feet per year (AFY) (savings based on results of the Irvine, California study that showed a 57 gpd savings based on a 3000 sq. ft. landscaped area). This program will conserve water supplies by providing a means to develop and implement residential irrigation schedules based on actual plant water needs.

All participating purveyors are signatories of the Memorandum of Understanding Regarding Water Conservation in California and participate in implementing the 14 Best Management Practices. This program would meet a portion of the coverage requirements for BMP 1 and 5. This program will increase water supply reliability within the Bay-Delta by reducing local water purveyors' need to supplement local water supplies with State Water.

3. Nature, Scope, Objectives

The proposed ET Controller Program will utilize wireless broadcast technology to develop weekly irrigation schedules based on evapotranspiration data from local CIMIS stations. There are six CIMIS stations located in Santa Barbara County, which will provide ET data appropriate for the proposed project area.

The scope of the ET Controller Program will include the marketing and distribution of 625 ET Controllers over a period of three years to the residential customers with the highest irrigation water demand. During the first year, the partner purveyors (City of Santa Barbara, Goleta Water District, and the Santa Barbara County Water Agency representing the City of Lompoc, Vandenberg Village Community Services District and the City of Santa Maria) will distribute 125 ET Controllers, and then 250 in each consecutive year. Santa Barbara County Water Agency will be the fiscal agent for the program.

The main objective of this program is to achieve a long-term 25% reduction in average residential landscape water use through the installation and use of ET Controllers estimated at 291 AFY. Another objective of the program includes providing partner purveyors with an opportunity to educate residential customers and landscape contractors about low-water using landscaping, efficient irrigation practices and other water management methods.

It is to the benefit of the partner water purveyors to promote new water efficient technologies like the ET Controller. By increasing the demand for manufacturing of the ET Controller through water purveyor purchases, the ET Controller Program will allow Network Services to increase production of the ET Controller and move this product to the retail market. Increased market availability will benefit the partner purveyors as well as water purveyors statewide. Furthermore, the demonstrated water savings and other benefits of this program will be used to show other residential customers in the market for a new irrigation controller the benefits of purchasing an ET Controller after the subsidized distribution program has ended

Additionally, this program will allow partner purveyors to meet a portion of the coverage requirements for California Urban Water Conservation Council's (CUWCC) BMP 1 and 5.

4. Methods and Procedure

The program will be implemented by staff of the participating purveyors. The purveyors will set up a contract with CTSI to purchase ET Controllers and to conduct training workshops. The purveyors will use a direct marketing campaign and ET Controller demonstration sites to attract residential customers with the highest irrigation water demand to participate in the program. ET controllers with rain sensors will be distributed at no cost to participating customers. Two training workshops for local landscape contractors will be held once per year for the first two years, to train contractors to install the ET controllers. Installation procedures will also include an evaluation of the existing irrigation system and recommendations for improvements to the system. Customer will receive a free soil probe and will be shown how to monitor soil moisture to verify the performance of the ET Controller. The use of the soil probes was shown to be very effective for customer education and acceptance of the ET Controller operation in the Irvine, California study. Customers will enter into contract with Network Services who will provide ET signal, customer service and support for a \$4 per month fee, which will be paid by customer. The purveyors will evaluate the possibility of adding the monthly fee to the customer's water bill, to ensure the customer's long-term participation.

The partner purveyors will implement this program by following the procedure outline in the bulleted list below:

- Receive grant funding
- Participating purveyors create a work team
- Set up contract with consultant CTSI, for purchase of ET Controllers and training of landscape contractors
- Work team develops training details and marketing plan
- Purchase ET Controllers, soil probes and rain sensors
- Set up demonstration sites for installation
- Train landscape contractors
- Market program to customers with the highest residential landscape water use
- Purveyor staff will meet with customer for initial evaluation of irrigation system, site layout, and to review services and benefits of ET Controllers along with prior water use statistics
- Coordinate installation appointments with resident and contractor
- Installation includes installing ET Controller and rain sensor, evaluation of irrigation system, written report on recommend improvements to irrigation system, distribution of a soil probe and demonstration of its use.
- Conduct follow up activities to ensure the ET Controller is functioning properly and that customer is aware of services available from Signal Provider
- Monitor water use of participating customers
- Prepare quarterly and annual update reports

5. Schedule - Appendix A

6. Monitoring and Assessment

Progress towards a 25% reduction in residential landscape water use will be measured by reviewing the customer's historical water use (3 years prior to project) and comparing it to water use for the year following the installation of an ET Controller. Weather will be normalized for the four years in question to ensure that a comparison is statistically valid. Each purveyor will compile historical use data from their water billing databases for each customer installing an ET Controller. This information will be entered into a database specifically developed for the ET Controller Program monitoring. The customer's water use will be tracked monthly and any significant changes will be noted and acted upon accordingly. This information will be submitted with each quarterly or annual progress report.

C. Outreach, Community Involvement, and Information Transfer

1. Outreach Efforts

Purveyor staff will develop an outreach program including targeted, direct mailings to residential customers with the highest irrigation water demand, informational brochures, and printed message on water billing statement. Staff will set up an initial evaluation with interested customers to review the historical water use data and demonstrate the potential water and financial savings of the program.

Landscape contractors will be contacted via mail and phone to participate in training workshops for ET Controller installation and irrigation system evaluation. They will be motivated to participate by the program benefits, which include payment for installation of ET Controller, potential increase in customer base, and professional development through training workshops. The program will be designed to encourage participation by a social and economic cross section of landscape service providers.

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2. Training, Employment and Capacity Building Potential

It is estimated that 625 residents will receive training in irrigation water management techniques. In addition, fifty to one hundred Landscape Contractors and their employees will be trained to install the ET Controllers and evaluate irrigation systems and will gain employment for installation of the ET Controllers. Employees of the landscape contractors will gain experience through maintaining landscapes fitted with ET Controllers on the irrigation systems that will be useful as the market availability of the ET Controllers increases. Purveyor staff involved in the program will receive training in irrigation system management.

In Santa Barbara County, workers employed in the landscape maintenance field may earn wages from \$6.00 to \$17.43 an hour, depending on experience. According to the *Occupational Outlook Report* for Santa Barbara County for 1999, the average wage for those with three plus years of experience is \$9.61 per hour. This pay range would result in a yearly income of \$19,988.80. Therefore, landscape maintenance workers would fall into the low- to moderate-income families (those earning less than \$30,000 a year). The seasonal variation in landscape maintenance work availability further complicates the financial situation of these individuals. In addition, it is estimated that a large labor force exists for this field, so competition for landscape maintenance positions is fierce.

The partner purveyors believe that the professional development gained through the training workshops and continued maintenance of landscapes fitted with ET Controllers on the irrigation system will provide a competitive edge for participating landscape contractors and their employees. Residents of Santa Barbara County are widely known for their support of environmentally sensitive technology and experience with the ET Controllers will increase the marketability of the landscape contractors and their employees involved in the ET Controller Program.

Dissemination of Summary/Promotion of Application

Summary reports will be prepared on a quarterly and annual basis. Purveyor staff will provide follow-up reports to all ET Controller Program participants that demonstrate current water use with the ET Controller compared to historical water use data. Purveyor staff will produce a brochure outlining water savings of first year participants that will be disseminated to potential second and third year participants. The annual summary reports and final program report will be shared at the CUWCC Plenary sessions, and other water conservation conferences and meetings. Progress reports on the program will also be published in the Santa Barbara County Water Agency's *Water Connections* newsletter, other industry publications and on partner purveyors' websites.

3. Letter of Notification to Local Entities Impacted by Proposal - Appendix B

D. Qualifications of Applicants

1. Resume of project managers - Appendix C

2. External cooperators

Network Services will provide, as part of the \$4 per month fee paid by customers, the ET signal, customer service and support. Network Services provided the same services for the Irvine, California study.

CTSI will provide the ET Controllers in partnership with Network Services. They will also conduct two workshops for landscape contractor training. CTSI provided the same services for the Irvine, California study.

Landscape Contractors that complete the training workshops will install ET Controllers and provide irrigation system evaluations and recommendations for improvements.

3. Partnerships developed for implementation

The Santa Barbara County Water Agency, City of Santa Barbara and Goleta Water District have developed a partnership for proposal preparation and, if funding is received, will continue this partnership to implement the ET Controller program. Each of these partners will provide staff support for the program. Additional partners include CTSI and Network Services, which will provide training, customer service and support. In addition, the City of Lompoc, the Vandenberg Village Community Services District, and the City of Santa Maria will be participating in this program through representation of the Santa Barbara County Water Agency.

E. Costs and Benefits

1. Budget Summary and Breakdown - Appendix D

2. Budget Justification

Labor Costs

Labor costs for staff of the Santa Barbara County Water Agency, City of Santa Barbara, and Goleta Water District include compensation, overhead, materials, and benefits. The number of hours spent by each staff person were estimated from two four-hour training workshops and a 1 hour initial evaluation and administrative time of 2 hours per ET Controller installed. The labor costs for CTSI consultants is estimated with their hourly rate of \$85 for two training workshops, contract arrangements, and support for the water purveyors involved in the program. Labor costs for installation of the ET Controller is estimated from hourly rates for trained landscape contractors' time.

Equipment

The cost of the ET Controllers, soil probes, and rain sensors is based on present market value and estimated savings for high volume orders.

Supplies

The outreach materials and educational brochures will be provided by the partner purveyors at cost.

Travel

No travel expenditures are included in this program.

3. Benefit Summary and Breakdown

Quantifiable Benefits

Residential landscape water use will be reduced at 625 homes in the partner purveyors' service areas for an estimated savings of 291 AFY. This reduction in water use will benefit CALFED because of reduced need for State water by the

participating purveyors. Participating purveyors will also benefit because of the savings in marginal cost of the reduced State water requests. Participating rate payers will benefit from reduced water costs due to landscape irrigation savings.

Non-Quantifiable Benefits

Over watering residential landscapes causes runoff with pollutants to enter the local waterways. Fertilizers, herbicides, pesticides, pet waste and other pollutants carried in the water have caused local creeks and the ocean to be polluted. By installing ET Controllers, the pollutant load in the storm drains will be reduced resulting in fewer pollutants reaching the creeks and ocean.

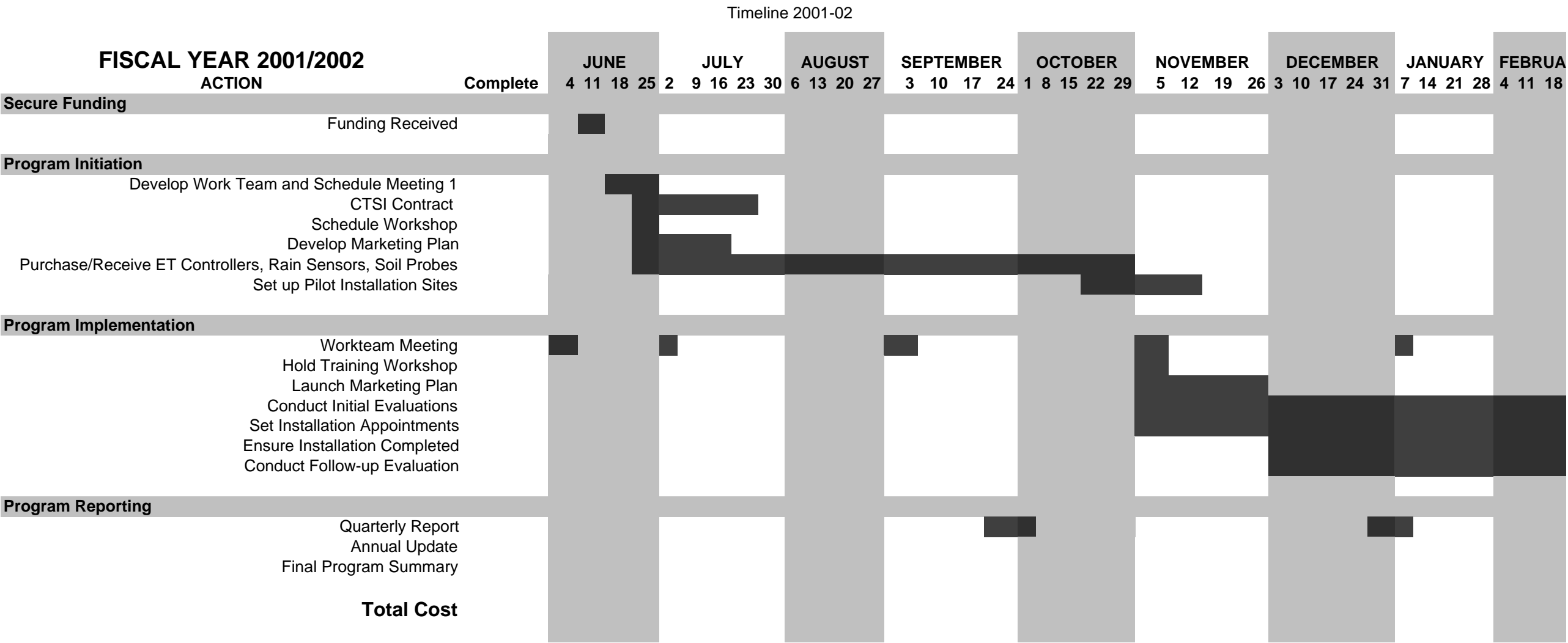
Through the reduction in over watering produced by the installation of the ET Controllers, the need for lawn mowing will be reduced. As a result, the amount of greenwaste that is sent to Santa Barbara County's Tajiguas Landfill will be reduced prolonging the life of the landfill.

The ET Controller Program will provide increased commercial presence for the Water Conservation Programs run by each water purveyor within the County. This will increase the residents' awareness of the necessity of conserving water even when supplies seem plentiful.

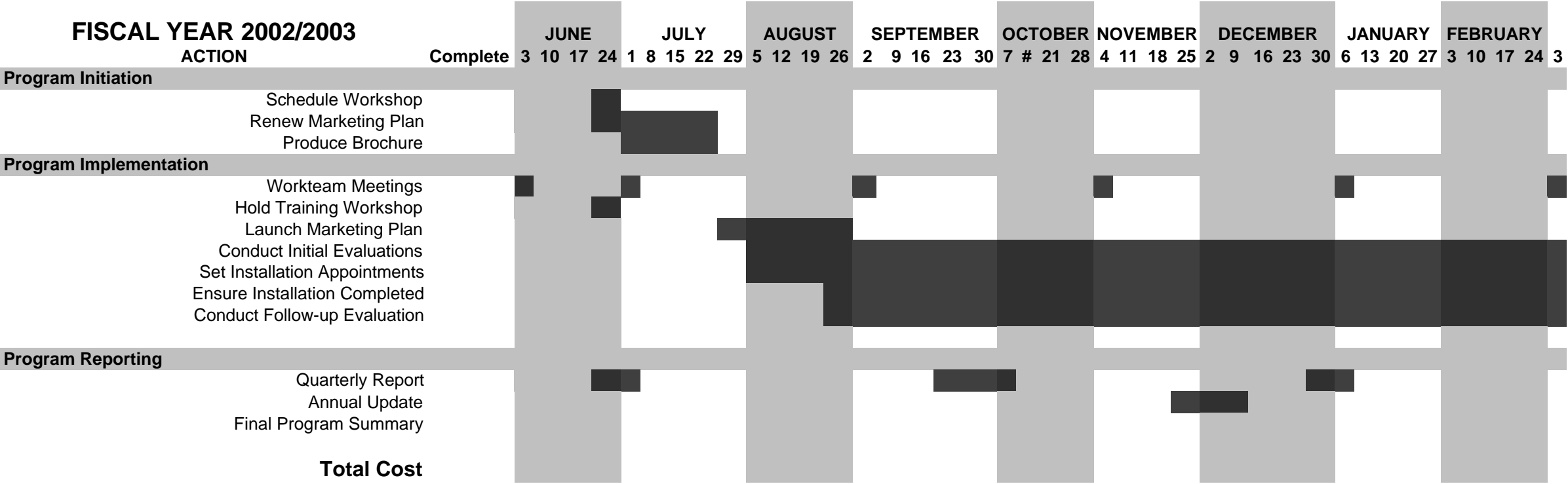
Individuals that participate in the ET Controller Program will encourage their friends and family to purchase ET Controllers for their irrigation systems as well. This will increase the demand for the ET Controller and make procuring this water efficient technology easier.

CALFED and the partner purveyors will benefit through this program because of meeting part of the coverage requirements for CUWCC's BMP 1 and 5.

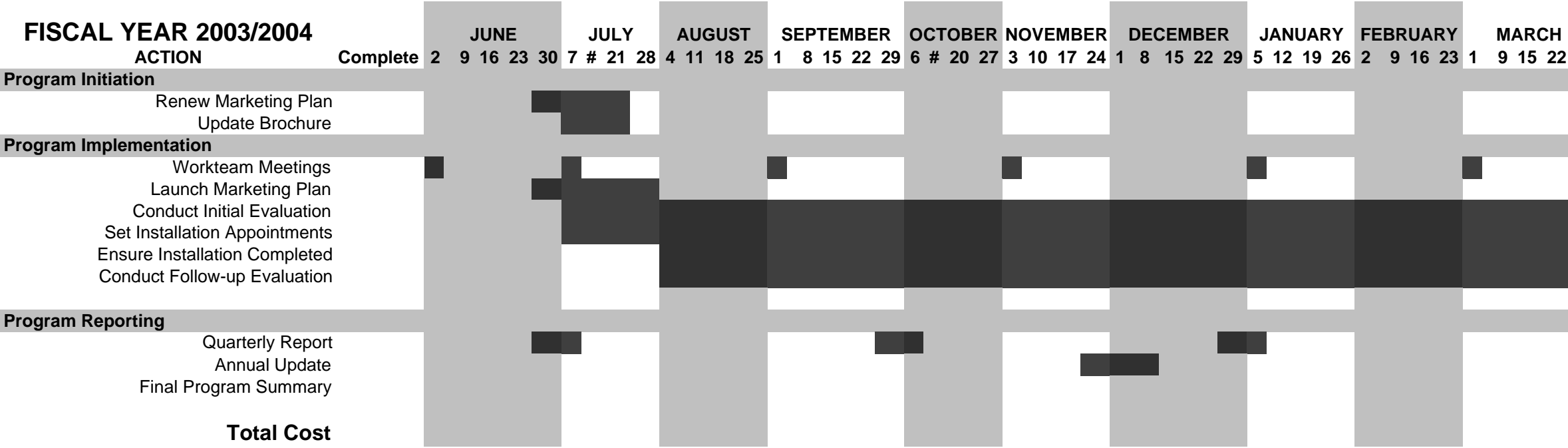
4. Assessment of Costs and Benefits - Appendix E

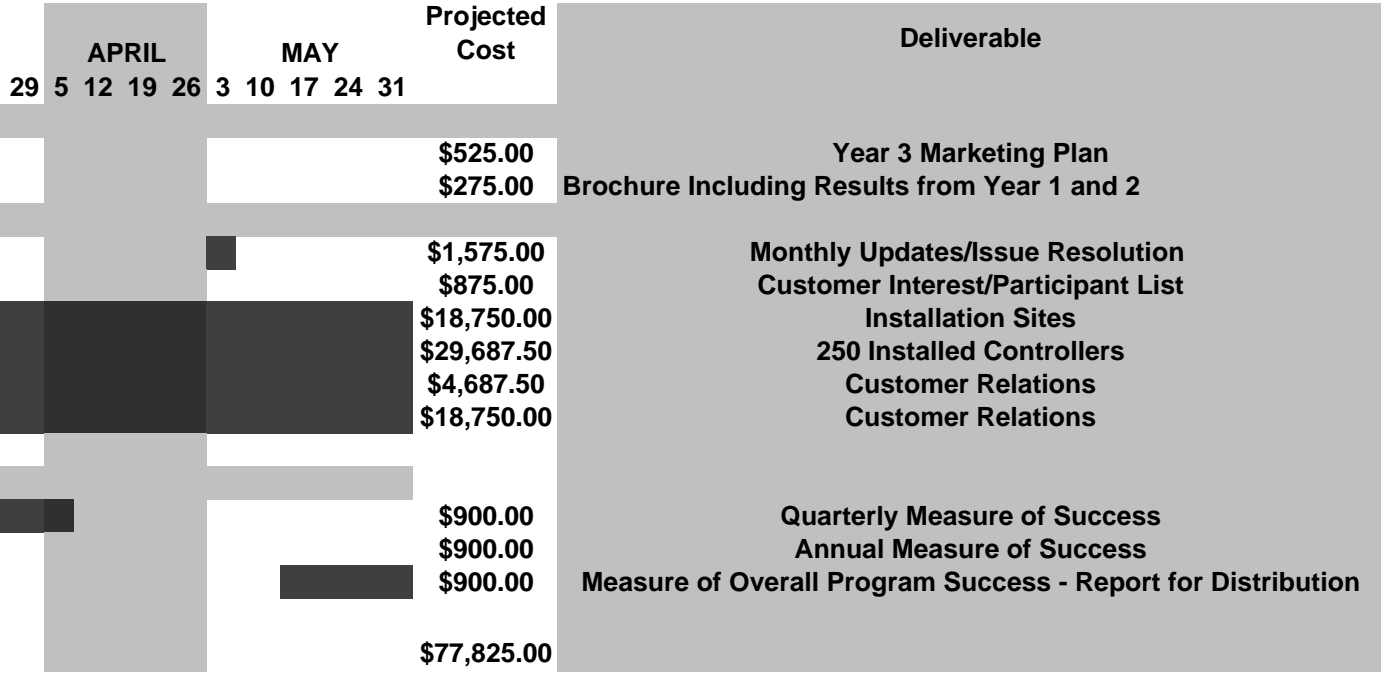


RY 25	MARCH	APRIL	MAY	Projected Cost	Deliverable
				\$0.00	Funds to Purchase Needed Supplies
				\$450.00	Finalized Workplan/Schedule/Budget
				\$900.00	Contract Specifications
				\$450.00	Workshop Details for Invitations
				\$4,500.00	Year 1 Marketing Plan
				\$142,325.00	ET Controllers/Rain Sensors/Soil Probes
				\$1,312.50	Demonstration Sites for Workshop and Marketing Purposes
				\$1,575.00	Monthly Updates/Issue Resolution
				\$1,700.00	Contractors with installation experience
				\$1,850.00	Customer Interest/Participant List
				\$9,375.00	Installation Sites
				\$14,843.75	125 Installed Controllers
				\$2,343.75	Customer Relations
				\$9,375.00	Customer Relations
				\$900.00	Quarterly Measure of Success
				\$0.00	Annual Measure of Success
				\$0.00	Overall Program Success
				\$191,900.00	



MARCH				APRIL				MAY				Projected Cost	Deliverable
10	17	24	31	7	14	21	28	5	12	19	26		
												\$450.00	Workshop Details for Invitations
												\$2,250.00	Year 2 Marketing Plan
												\$550.40	Brochure Including Year 1 Results
												\$1,575.00	Monthly Updates/Issue Resolution
												\$1,700.00	Contractors with installation experience
												\$1,400.00	Customer Interest/Participant List
												\$18,750.00	Installation Sites
												\$29,687.50	250 Installed Controllers
												\$4,687.50	Customer Relations
												\$18,750.00	Customer Relations
												\$900.00	Quarterly Measure of Success
												\$900.00	Annual Measure of Success
												\$0.00	Overall Program Success
												\$81,600.40	





Item	Amount	Units	Qty.	Total Cost	Units	Life (years)	Present Value	Local Share	CALFED Request
a. Salaries and Wages									
Santa Barbara County Water Agency Coordinator	\$75.00	\$/hour	381	\$28,575.00	\$			\$28,575.00	
City of Santa Barbara Coordinator	\$75.00	\$/hour	762	\$57,150.00	\$			\$57,150.00	
Goleta Water District Coordinator	\$75.00	\$/hour	762	\$57,150.00	\$			\$57,150.00	
b. Fringe Benefits									
None requested	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
c. Supplies									
Outreach Materials in Packet to Customers									
<i>How to Water Your Garden</i> (Sunset)	\$0.85	\$/booklet	825	\$701.25	\$			\$701.25	
<i>Lawn Watering Guide</i>	\$0.40	\$/brochure	825	\$330.00	\$			\$330.00	
<i>Waterwise Plants for Santa Barbara</i>	\$0.75	\$/booklet	825	\$618.75	\$			\$618.75	
d. Equipment									
<i>Weather TRAK</i> ET Controller	\$200.00	\$/controller	625	\$125,000.00	\$				\$125,000.00
Soil Probes	\$12.00	\$/probe	625	\$7,500.00	\$				\$7,500.00
Rain Sensor	\$15.00	\$/sensor	625	\$9,375.00	\$				\$9,375.00
e. Services or Consultants									
CTSI Workshop Instructor	\$800.00	\$/workshop	2	\$1,600.00	\$				\$1,600.00
<i>Weather TRAK</i> ET Controller Installation	\$100.00	\$/residence	625	\$62,500.00	\$				\$62,500.00
Printing									
Educational Brochures	\$0.40	\$/brochure	875	\$350.00				\$350.00	
Quarterly and Annual Reports									
f. Travel									
None Requested	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
g. Other Direct Costs									
Planning	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Design	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Construction	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Maintenance	Included in \$4.00 montly fee to Network Servcies								

[illegible]

Item	Amount	Units	Qty.	Total Cost	Units	Life (years)	Present Value	Beneficiary
Quantified Costs								
Santa Barbara County Water Agency Coordinator	\$75.00	\$/hour	381	\$28,575.00	\$	20	\$28,575.00	n/a
City of Santa Barbara Coordinator	\$75.00	\$/hour	762	\$57,150.00	\$	20	\$57,150.00	n/a
Goleta Water District Coordinator	\$75.00	\$/hour	762	\$57,150.00	\$	20	\$57,150.00	n/a
<i>How to Water Your Garden</i> (Sunset)	\$0.85	\$/booklet	825	\$701.25	\$	20	\$701.25	n/a
<i>Lawn Watering Guide</i>	\$0.40	\$/brochure	825	\$330.00	\$	20	\$330.00	n/a
<i>Waterwise Plants for Santa Barbara</i>	\$0.75	\$/booklet	825	\$618.75	\$	20	\$618.75	n/a
<i>Weather TRAK</i> ET Controller	\$200.00	\$/controller	625	\$125,000.00	\$	20	\$125,000.00	n/a
Soil Probes	\$12.00	\$/probe	625	\$7,500.00	\$	20	\$7,500.00	n/a
Rain Sensor	\$15.00	\$/sensor	625	\$9,375.00	\$	20	\$9,375.00	n/a
CTSI Workshop Instructor	\$800.00	\$/workshop	2	\$1,600.00	\$	20	\$1,600.00	n/a
<i>Weather TRAK</i> ET Controller Installation	\$100.00	\$/controller	625	\$62,500.00	\$	20	\$62,500.00	n/a
Educational Brochures	\$0.40	\$/brochure	875	\$350.00	\$	20	\$350.00	
Design of Brochures (20 hours)	\$23.77	\$/hour	20	\$475.40	\$	20	\$475.40	
Subtotal				\$351,325.40			\$351,325.40	
Quantified Benefits								
Water Savings	291	AFY	for 625 controllers	\$58,200.00	\$	20	\$58,200.00	CALFED and Partner Purveyors
Customer Water Savings	291	AFY	for 625 residences	\$433,518.00	\$	20	\$433,518.00	Rate Payers
Subtotal				\$491,718.00			\$491,718.00	
Non-Quantified Costs								
None	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Non-Quantified Benefits								
Reduced Runoff	n/a	n/a	n/a	n/a	n/a	n/a	n/a	South Coast Residents
Decreased Greenwaste Production	n/a	n/a	n/a	n/a	n/a	n/a	n/a	South Coast Residents
Increased Awareness of Conservation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	CALFED and Partner Purveyors
Increased Marketshare for ET Controllers	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Rate payers and Network Services
Coverage for BMP 1 and 5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	CALFED and Partner Purveyors
Analysis Assumptions								
Savings estimates based on Irvine Study - 25% savings or 57 gpd on a estimated average landscape of 3000 square feet.								
Landscape water use based on results of the Residential End Uses of Water Study								
Quantity of ET Controllers ordered based on the number of initial evaluations that could be completed monthly by each agency's staff.								